

SPLIT 139.7

Dart Aerospace Ltd.

Date: Friday, 02/05/2008 8:50:07 AM
User: Julie Lecocq

Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services		Drawing Name	: BRACKET ASSEMBLY		
Job Number	: 38982			(2)		
Estimate Number	: 10281					
P.O. Number	:					
This Issue	: 02/05/2008		S.O. No. :	Part Number	: D3183043	
Prsht Rev.	: NC			Drawing Number	: D3183 REV C1	
First Issue	: / /		Type :	Project Number	: N/A	
Previous Run	: 37072			Drawing Revision	: C1	
Written By	:			Material	:	
Checked & Approved By	: JWD 08.5.02			Due Date	: 30/05/2008	
Comment	: Est Rev:Pick:A 04.02.18 New issue KJ/DS					

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :	
1.0	M174B2000X01500	17-4 SS Bar	 Comment: Qty.: 0.4812 f(s)/Unit Total : 11.5492 f(s) Material: 17-4 SS Bar per AMS 5604/5643 (M17-4-B1.500x02.000) Identify for D3183-043 Batch: M14773 x 25Lnts HA/SD/08/05/21 (24)
2.0	BAND SAW	BAND SAW	 Comment: BAND SAW Cut blanks: (1.500" x 2.000") 5.500" long
3.0	HAAS1	HAAS CNC VERTICAL MACHINING #1	 Comment: HAAS CNC VERTICAL MACHINING #1 1-Machine D3183-3 as per Folio FA322 and Dwg D3183 Identify as D3183-3 2-Deburr 3-Scribe batch number
4.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE	 Comment: INSPECT PARTS AS THEY COME OFF MACHINE

W/O:

WORK ORDER CHANGES

DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D3183-043 PAR #: N/A Fault Category: Prod/Machined ²¹⁵ NCR: Yes No DQA: S Date: 08/05/30
 QA: N/C Closed: S Date: 08/05/30

WORK ORDER NON-CONFORMANCE (NCR)								
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/05/23	3.0	3 parts scrap 4 parts flew off the jig while machining.	<u>S</u>	Scrap and Destro and Replace BB M94196	S 08/05/23	<u>S</u>	<u>S</u>	<u>S</u>
08/05/23	3.0	1 part scrap. 1 part off by .010"	<u>S</u>	Scrap and Destro and Replace BB M94196	08/05/23	<u>S</u>	<u>S</u>	<u>S</u>
08/05/25	3.0	2 parts scrap 6 parts flew off the jig while machining reason: round corners on material	<u>S</u>	Scrap and Destro and Replace BB 1473	N.A 08/05/25	<u>S</u>	<u>S</u>	<u>S</u>

NOTE: Date & initial all entries

Date: Friday, 02/05/2008 8:50:07 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: BRACKET ASSEMBLY

Job Number: 38982

Part Number: D3183043

Job Number:



Seq. #: Machine Or Operation:

Description :

5.0 QC8 SECOND CHECK



51 08/05/28

Comment: SECOND CHECK

6.0 D312121 Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 48.0000 Each(s)

Pick:

Qty Part Number Description Batch
2 D3121-21 Bolt 1338994

51 08/05/28

7.0 D3183045 Bearing Assembly



Comment: Qty.: 2.0000 Each(s)/Unit Total : 48.0000 Each(s)

Pick:

Qty Part Number Description Batch
2 D3183-045 Bearing Ass 1338983 x3

51 08/05/28

8.0 SMALL FAB 1 SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble D3183-043 as per Dwg D3183.

51 08/05/28

9.0 QC5 INSPECT WORK TO CURRENT STEP



500/05/28 (2)

Comment: INSPECT WORK TO CURRENT STEP

10.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: PPP 39006

13 08/05/28 (1)
08/05/29 (1)

11.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



MF 08-05-28

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	38982
Description: Bracket		Part Number:	D3183-3
Inspection Dwg: D3183	Rev: C1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

First Article Prototype

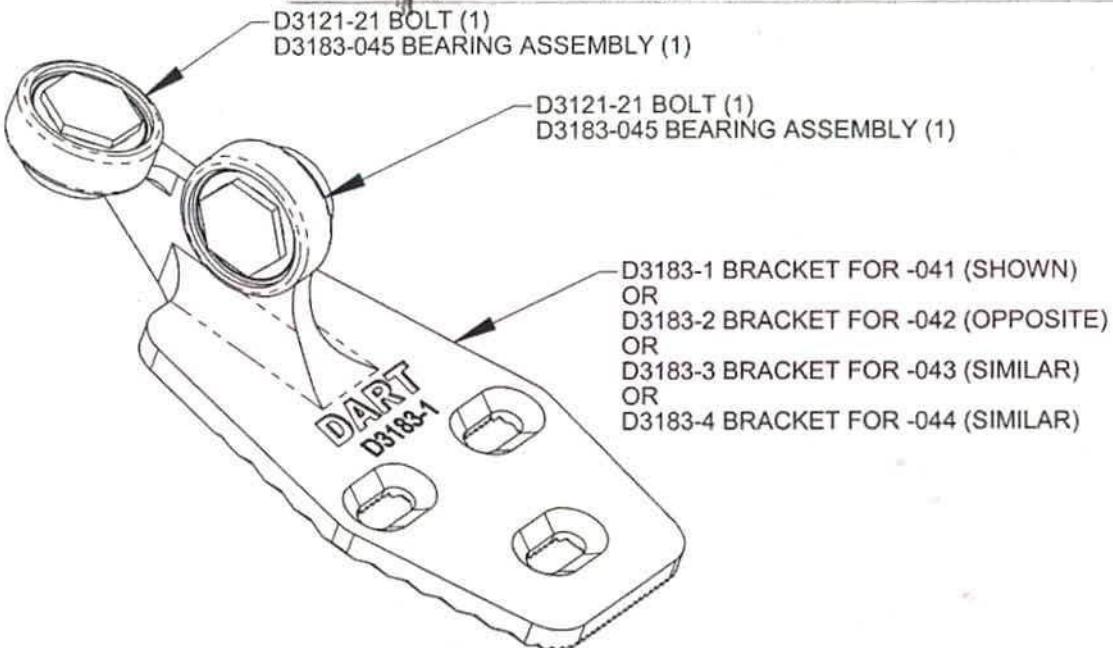
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
R0.190	+/-0.030	R.188	—			
R0.063	+/-0.010	R.063	—			
0.182	+/-0.010	185	—			
0.070	+/-0.010	0.073	✓			
0.100	+/-0.010	.100	—			
Ø0.201 x 0.100	+/-0.010	Ø0.201 x 100	—			
0.182	+/-0.010	185	—			
5.32	+/-0.030	5.323	—			
5.036	+/-0.010	5.036	—			
2.120	+/-0.010	2.120	—			
1.290	+/-0.010	1.290	—			
0.365	+/-0.010	.366	—			
0.218	+/-0.010	.211	—			
1.030	+/-0.010	1.030	—			
1.90	+/-0.030	1.887	—			
1.012	+/-0.010	1.012	✓			
Ø0.201 x 0.100	+/-0.010	Ø0.201 x 100	—			
0.786	+/-0.010	0.778	✓			
Ø0.392	+0.002/-0.000	Ø0.393	✓			
R0.19	+/-0.030	R.19	—			
3.954	+/-0.010	3.954	—			
0.162	+/-0.010	0.160	✓			
R0.19	+/-0.030	R.19	—			
R0.25	+/-0.030	R.25	—			
4.26	+/-0.030	4.26	—			
2.080	+/-0.030	2.070	✓			
1.155	+/-0.010	1.150	✓			
0.162	+/-0.010	.162	—			
0.36	+/-0.030	0.355	✓			
0.615	+/-0.010	.615	—			
0.435	+/-0.010	436	—			
0.200	+/-0.010	.203	—			
0.381	+/-0.010	.372	—			
0.032	+/-0.010	0.030	✓			

Measured by:	SA/H.A 08/05/23	Audited by:	and	Prototype Approval:	N/A
Date:	08/05/23	Date:	08/05/23	Date:	N/A

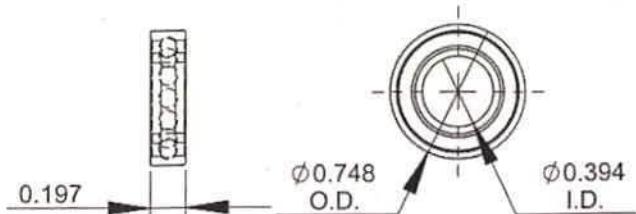
Rev	Date	Change	Revised by	Approved
A	03.11.12	New Issue	P/O D3183-043	KJ/RF
B	04.03.15	Changes as per revision C	KJ/JLM/RF	
C	06.03.09	Dwg Rev update	KJ/JLM	
D	08.01.28	0.182 dimension removed	KJEC/DD	BB

DARTD/COPY ISSUED
04.03.01

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. C
		D3183	SHEET 1 OF 4
DATE	04.02.17	TITLE	SCALE
		BRACKET ASSEMBLY	1:1

RELEASED
04.03.01

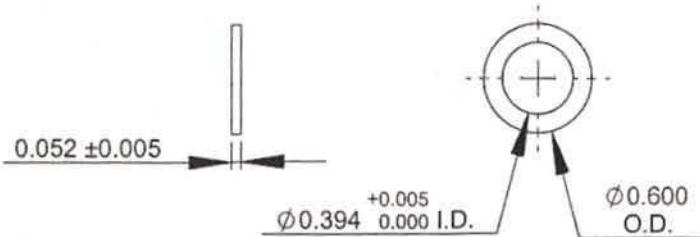
D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)
D3183-044 BRACKET ASSEMBLY (SIMILAR)



**D3183-5 BEARING:
SPECIFICATION CONTROL DRAWING**

1) SINGLE ROW, DEEP GROOVE,
CONRAD TYPE, SHIELDED
2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
3) ALL DIMENSIONS ARE IN INCHES

SHOP COPY
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 38982



D3183-7 WASHER

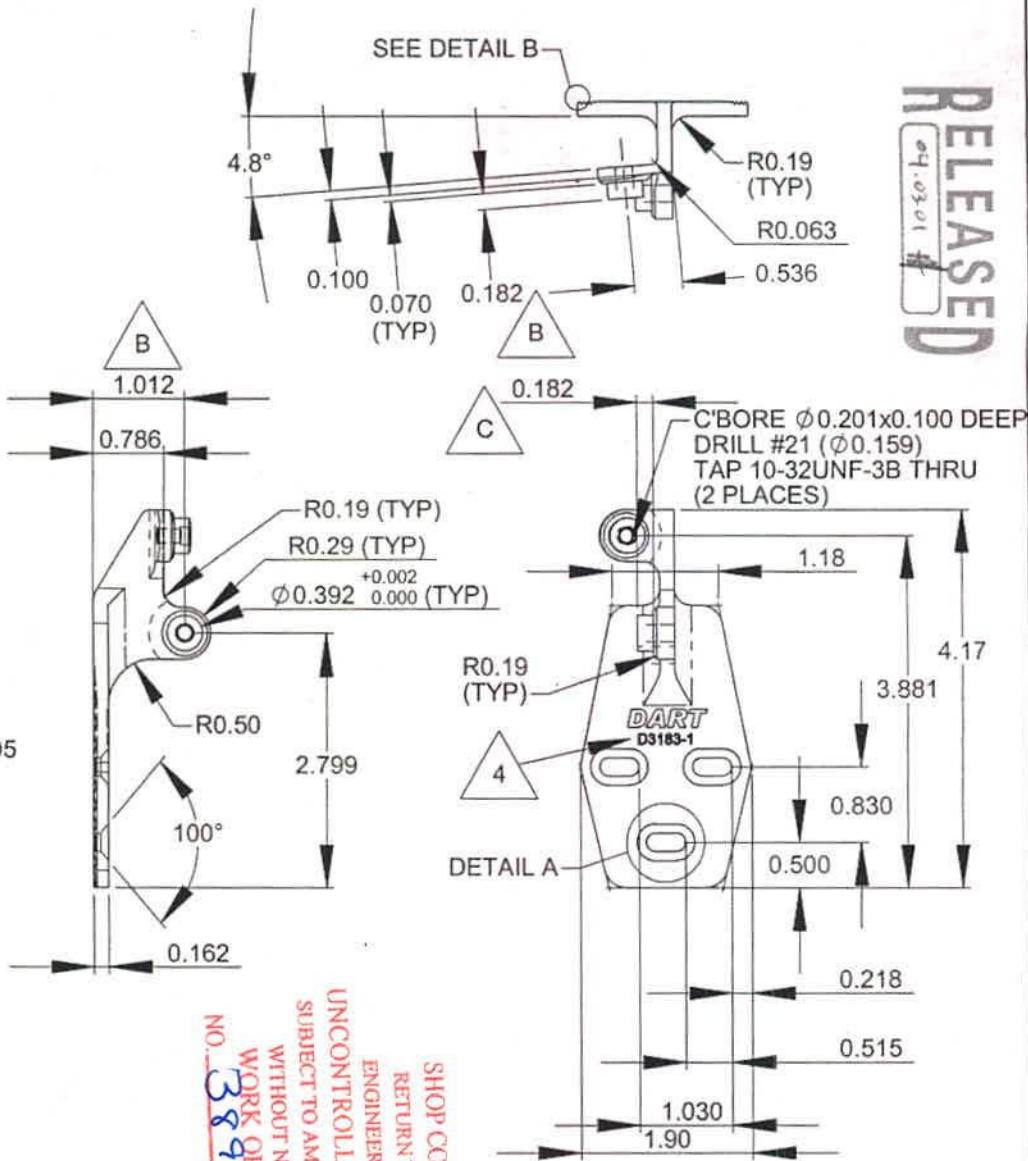
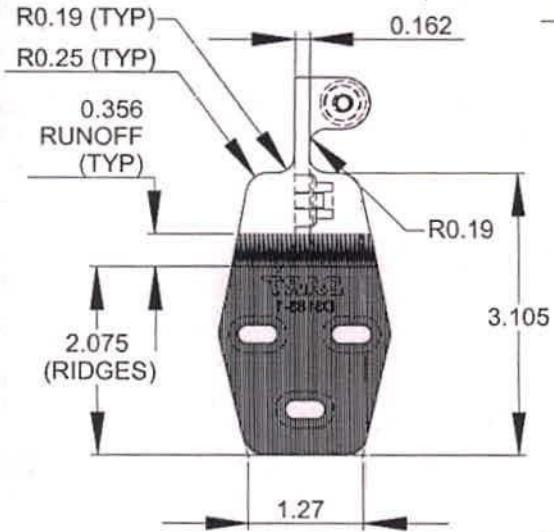
1) MATERIAL: AISI 303 ROUND BAR (M303R)
ANNEALED
2) BREAK ALL SHARP EDGES 0.005 TO 0.010
3) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
4) ALL DIMENSIONS ARE IN INCHES

COPYRIGHT © 2003 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

D3183-1 BRACKET SHOWN
D3183-2 BRACKET OPPOSITE

- 1) D3183-1 CAN BE MADE FROM D3183-3
D3183-2 CAN BE MADE FROM D3183-4
- 2) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 3) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 4) ENGRAVE DART P/N & LOGO AS SHOWN
- 5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 6) ALL DIMENSIONS ARE IN INCHES



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 38982

DESIGN	DRAWN BY	DART AEROSPACE LTD
		HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	REV. C
		DRAWING NO.
		D3183
DATE	04.02.17	TITLE
		BRACKET ASSEMBLY
		SCALE
		1:2
		SHET 2 OF 4

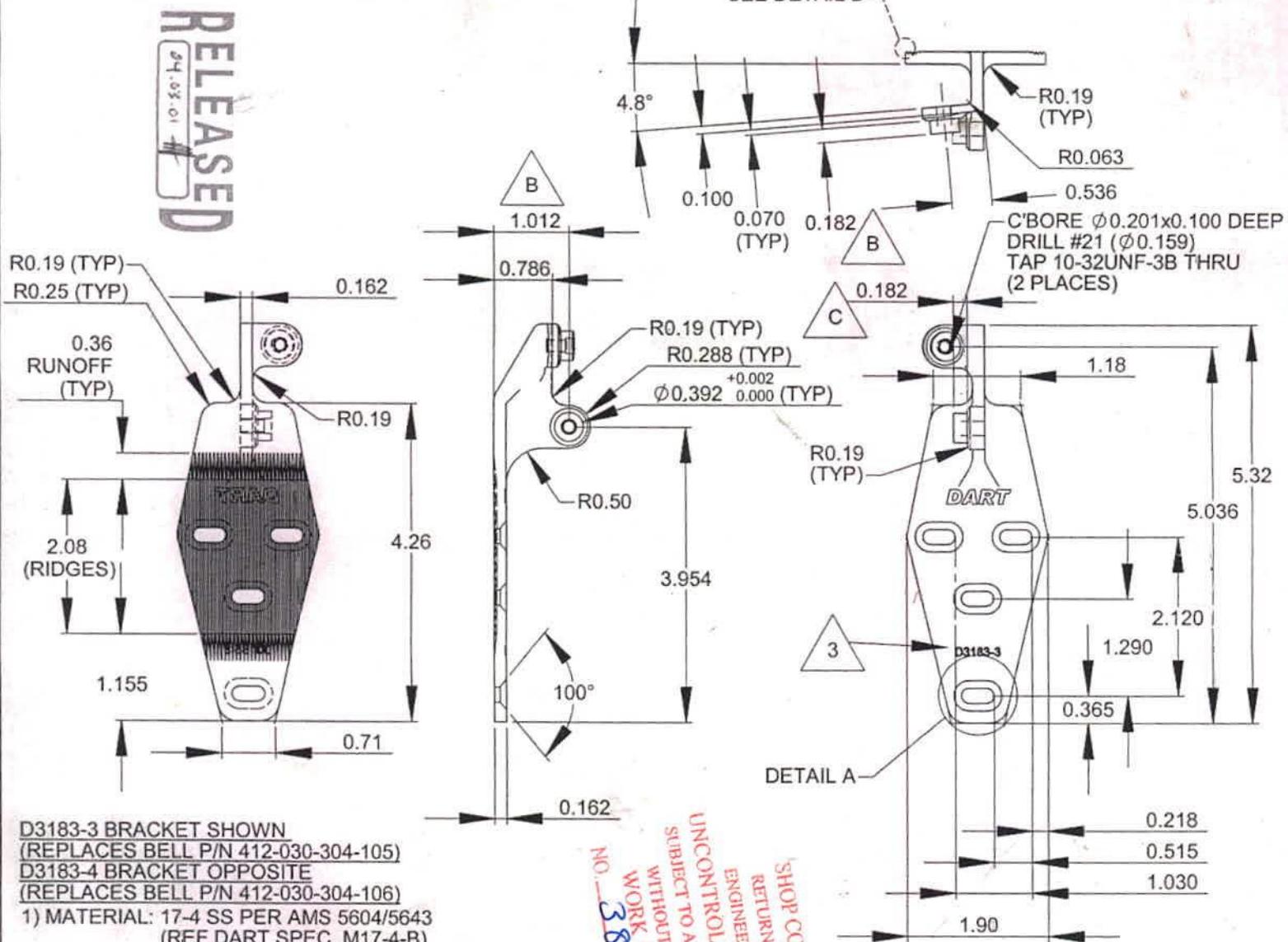
DART

© DART AEROSPACE LTD 2003
DRAFT

DART



DESIGN	DRAWN BY	DART AEROSPACE LTD
		HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
		D3183
DATE	04.02.17	TITLE
		BRACKET ASSEMBLY
		SCALE
		REV. C
		SHEET 3 OF 4
		1:2



SHOP COPY
RETURN TO
ENGINEERING COPY
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 38982

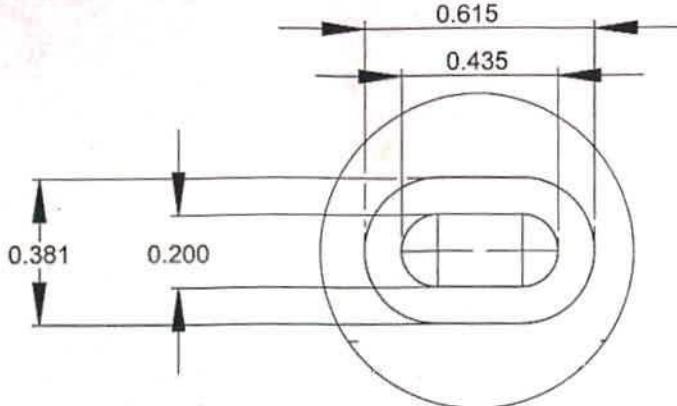
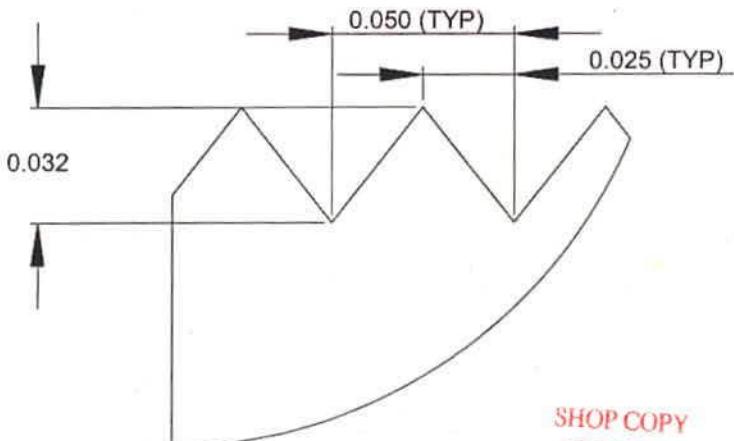
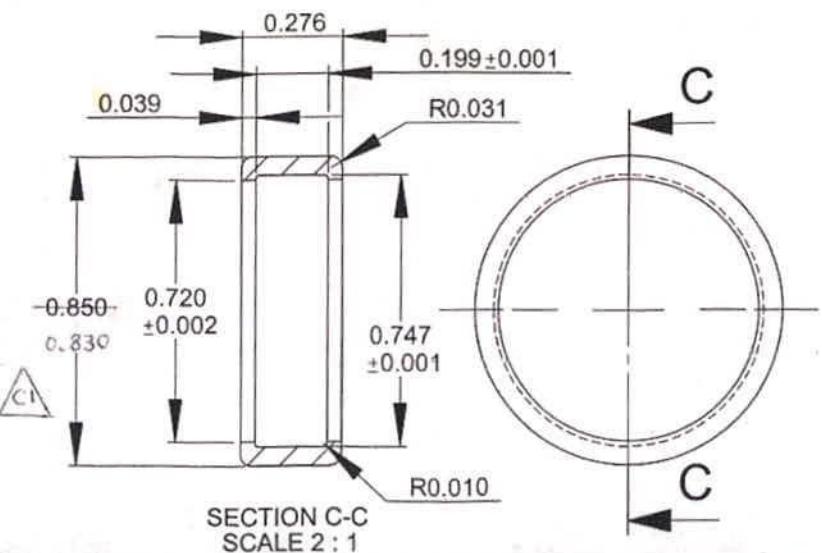
D3183-3 BRACKET SHOWN
(REPLACES BELL P/N 412-030-304-105)
D3183-4 BRACKET OPPOSITE
(REPLACES BELL P/N 412-030-304-106)

- 1) MATERIAL: 17-4 SS PER AMS 5604/5643
(REF DART SPEC. M17-4-B)
MIN ULTIMATE STRENGTH = 150 ksi
MIN YIELD STRENGTH = 100 ksi
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 3) ENGRAVE DART P/N & LOGO AS SHOWN
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

DART

DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO.	REV. C
		D3183	SHEET 4 OF 4

DATE 04.02.17 TITLE BRACKET ASSEMBLY SCALE 1:1

DETAIL A (2 : 1)**RELEASED**
04.03.01DETAIL B (20 : 1)SECTION C-C
SCALE 2 : 1

SHOP COPY

RETURN TO

ENGINEERING

UNCONTROLLED COPY

SUBJECT TO AMENDMENT

WITHOUT NOTICE

WORK ORDER

NO 38982**D3183-9 CAP**

- 1) MATERIAL: DELRIN ROD, Ø1.00
(REF DART SPEC. M-DELRIN-R1.00)
- 2) TOLERANCES ARE PER DART QSI 018
UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

- 1) ASSEMBLE D3183-5 BEARING AND
D3183-9 CAP

COPYRIGHT © 2003 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL, AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED
OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.